

SEQUENCE LISTING

<110> Sakowicz, Roman
Beraud, Christophe
Guo, Jun
Freedman, Richard

<120> NOVEL MOTOR PROTEIN OF P. FALCIPARUM AND
METHODS FOR ITS USE

<130> CYTOP083

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<170> FastSEQ for Windows Version 4.0

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<212> DNA
<213> Plasmodium falciparum

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10006780-113001

10006780-113001

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Tyr Ile Glu Arg His Glu Phe Ile Val Asp Lys Val Phe Asp Asp Thr
50 55 60
Val Asp Asn Phe Thr Val Tyr Glu Asn Thr Ile Lys Pro Leu Ile Ile
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Asp Leu Tyr Glu Asn Gly Cys Val Cys Ser Cys Phe Ala Tyr Gly Gln
85 90 95
Thr Gly Ser Gly Lys Thr Tyr Thr Met Leu Gly Ser Gln Pro Tyr Gly

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Thr	Phe	Leu	Asn	Ile	Tyr	Asp	Lys	Asp	Asn	Thr	Lys	Gly	Ile	Phe	Ile			
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Ser	Phe	Tyr	Glu	Ile	Tyr	Cys	Gly	Lys	Leu	Tyr	Asp	Leu	Leu	Gln	Lys			
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Lys	Asp	Leu	Lys	Ile	Leu	Arg	Val	Leu	Thr	Lys	Glu	Glu	Leu	Ile	Leu			
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Lys	Met	Ile	Asp	Gly	Val	Leu	Leu	Arg	Lys	Ile	Gly	Val	Asn	Ser	Gln			
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Cys	Ile	Arg	Ala	Met	Asp	Ser	Asp	Lys	Asn	His	Ile	Pro	Phe	Arg	Asp			
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Phe	Gly	Lys	Tyr	Ser	Ser	Leu	Asn	Asp	Ile	Asp	Lys	Ile	Lys	Lys	Asn			
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10006780-113001

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10006780-113001

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 Arg His Glu Phe Ile Val Asp Lys Val Phe Asp Asp Thr Val Asp Asn
 50 55 60
 Phe Thr Val Tyr Glu Asn Thr Ile Lys Pro Leu Ile Ile Asp Leu Tyr
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 Gly Lys Thr Tyr Thr Met Leu Gly Ser Gln Pro Tyr Gly Gln Ser Asp
 100 105 110
 Thr Pro Gly Ile Phe Gln Tyr Ala Ala Gly Asp Ile Phe Thr Phe Leu
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 145 150 155 160
 Val Ala Ala Leu Glu Asn Gly Lys Lys Glu Val Val Val Lys Asp Leu
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 Asp Gly Val Leu Leu Arg Lys Ile Gly Val Asn Ser Gln Asn Asp Glu
 195 200 205
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 225 230 235 240
 Glu Arg Gly Ala Asp Thr Val Ser Gln Asn Lys Gln Thr Gln Thr Asp
 245 250 255
 Gly Ala Asn Ile Asn Arg Ser Leu Leu Ala Leu Lys Glu Cys Ile Arg
 260 265 270
 Ala Met Asp Ser Asp Lys Asn His Ile Pro Phe Arg Asp Ser Glu Leu
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10006780.113001

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 aatacattaa gatattcttc aagagttaag aacttttaaa ataaatctac atgtataaat 1020
 gaagaagatg atacaaatac cgaaagaatt agtatattag attcaaaggg atga 1074

<210> 6
 <211> 355
 <212> PRT
 <213> P. Falciparum

<400> 6
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 1 5 10 15
 Lys Lys Lys Lys Asp Ser Asp Ile Ile Thr Val Lys Asn Asn Cys Thr
 20 25 30
 Leu Tyr Ile Asp Glu Pro Arg Tyr Lys Val Asp Met Thr Lys Tyr Ile
 35 40 45
 Glu Arg His Glu Phe Ile Val Asp Lys Val Phe Asp Asp Thr Val Asp
 50 55 60
 Asn Phe Thr Val Tyr Glu Asn Thr Ile Lys Pro Leu Ile Ile Asp Leu
 65 70 75 80
 Tyr Glu Asn Gly Cys Val Cys Ser Cys Phe Ala Tyr Gly Gln Thr Gly
 85 90 95
 Ser Gly Lys Thr Tyr Thr Met Leu Gly Ser Gln Pro Tyr Gly Gln Ser
 100 105 110
 Asp Thr Pro Gly Ile Phe Gln Tyr Ala Ala Gly Asp Ile Phe Thr Phe
 115 120 125
 Leu Asn Ile Tyr Asp Lys Asp Asn Thr Lys Gly Ile Phe Ile Ser Phe
 130 135 140
 Tyr Glu Ile Tyr Cys Gly Lys Leu Tyr Asp Leu Leu Gln Lys Arg Lys

10006780-113001

145 150 155 160
Met Val Ala Ala Leu Glu Asn Gly Lys Lys Glu Val Val Val Lys Asp
165 170 175
Leu Lys Ile Leu Arg Val Leu Thr Lys Glu Glu Leu Ile Leu Lys Met
180 185 190
Ile Asp Gly Val Leu Leu Arg Lys Ile Gly Val Asn Ser Gln Asn Asp
195 200 205
Glu Ser Ser Arg Ser His Ala Ile Leu Asn Ile Asp Leu Lys Asp Ile
210 215 220
Asn Lys Asn Thr Ser Leu Gly Lys Ile Ala Phe Ile Asp Leu Ala Gly
225 230 235 240
Ser Glu Arg Gly Ala Asp Thr Val Ser Gln Asn Lys Gln Thr Gln Thr
245 250 255
Asp Gly Ala Asn Ile Asn Arg Ser Leu Leu Ala Leu Lys Glu Cys Ile
260 265 270
Arg Ala Met Asp Ser Asp Lys Asn His Ile Pro Phe Arg Asp Ser Glu
275 280 285
Leu Thr Lys Val Leu Arg Asp Ile Phe Val Gly Lys Ser Lys Ser Ile
290 295 300
Met Ile Ala Asn Ile Ser Pro Thr Ile Ser Cys Cys Glu Gln Thr Leu
305 310 315 320
Asn Thr Leu Arg Tyr Ser Ser Arg Val Lys Asn Phe Lys Asn Lys Ser
325 330 335
Thr Cys Ile Asn Glu Glu Asp Asp Thr Asn Thr Glu Arg Ile Ser Ile
340 345 350
Leu Asp Ser
355

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<211> 1086
<212> DNA
<213> P. Falciparum

<400> 7
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aaagtggata tgacaaaata tatagaaagg catgaattta ttgtagataa agtttttgat 180
gatacgggtg ataatttcac agtatatgag aataccataa aaccattaat aatagattta 240
tatgagaatg gttgtgtatg ttcttgtttt gcttatgggc aaacaggtag cgggaagact 300
tatacgatgt taggttcaca accgtatgga cagagtgata cccctggtat atttcaatac 360
gcagcagggg atatatttac ctttttaaat atttatgata aagataatac gaaagggata 420
tttatatcat tttatgaaat ttattgtggt aaattatatg atttattaca aaaacgtaag 480
atggtagcag cattagaaaa tgggaaaaaa gaagttgtag taaaagattt aaaaatatta 540
agagtattaa caaaagaaga attaataatta aaaatgatag atgggtgtttt attaagaaaa 600
attggtgtta attcacaata cgatgaatca tctagatcac atgctatatt aaatattgat 660
ttaaaagata taaataaaaa tacatctctt ggaaaaattg ctttcattga ttttagcagga 720
agtgaagag gagctgatac cgtttcacaa aataaacaac cacaaccca tggagctaata 780
attaatagat ctttactagc cttaaaggaa tgtattcgag ctatggattc agataaaaaat 840
catatacctt tcagagattc agaattaact aaagttttta gagatatatt tgtagggaaa 900
tctaaaagta ttatgatagc taatatctct cctacaatta gttgttgtga gcaaacattg 960
aatacattaa gatattcttc aagagttaag aacaagggca attcgaagct tgaaggtaag 1020
cctatcccta accctctcct cgggtctcgat tctacgcgta ccgggtcatca tcaccatcac 1080
cattga 1086

<210> 8
 <211> 361
 <212> PRT
 <213> P. Falciparum

<400> 8
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 1 5 10 15
 Lys Lys Lys Lys Asp Ser Asp Ile Ile Thr Val Lys Asn Asn Cys Thr
 20 25 30
 Leu Tyr Ile Asp Glu Pro Arg Tyr Lys Val Asp Met Thr Lys Tyr Ile
 35 40 45
 Glu Arg His Glu Phe Ile Val Asp Lys Val Phe Asp Asp Thr Val Asp
 50 55 60
 Asn Phe Thr Val Tyr Glu Asn Thr Ile Lys Pro Leu Ile Ile Asp Leu
 65 70 75 80
 Tyr Glu Asn Gly Cys Val Cys Ser Cys Phe Ala Tyr Gly Gln Thr Gly
 85 90 95
 Ser Gly Lys Thr Tyr Thr Met Leu Gly Ser Gln Pro Tyr Gly Gln Ser
 100 105 110
 Asp Thr Pro Gly Ile Phe Gln Tyr Ala Ala Gly Asp Ile Phe Thr Phe
 115 120 125
 Leu Asn Ile Tyr Asp Lys Asp Asn Thr Lys Gly Ile Phe Ile Ser Phe
 130 135 140
 Tyr Glu Ile Tyr Cys Gly Lys Leu Tyr Asp Leu Leu Gln Lys Arg Lys
 145 150 155 160
 Met Val Ala Ala Leu Glu Asn Gly Lys Lys Glu Val Val Val Lys Asp
 165 170 175
 Leu Lys Ile Leu Arg Val Leu Thr Lys Glu Glu Leu Ile Leu Lys Met
 180 185 190
 Ile Asp Gly Val Leu Leu Arg Lys Ile Gly Val Asn Ser Gln Asn Asp
 195 200 205
 Glu Ser Ser Arg Ser His Ala Ile Leu Asn Ile Asp Leu Lys Asp Ile
 210 215 220
 Asn Lys Asn Thr Ser Leu Gly Lys Ile Ala Phe Ile Asp Leu Ala Gly
 225 230 235 240
 Ser Glu Arg Gly Ala Asp Thr Val Ser Gln Asn Lys Gln Thr Gln Thr
 245 250 255
 Asp Gly Ala Asn Ile Asn Arg Ser Leu Leu Ala Leu Lys Glu Cys Ile
 260 265 270
 Arg Ala Met Asp Ser Asp Lys Asn His Ile Pro Phe Arg Asp Ser Glu
 275 280 285
 Leu Thr Lys Val Leu Arg Asp Ile Phe Val Gly Lys Ser Lys Ser Ile
 290 295 300
 Met Ile Ala Asn Ile Ser Pro Thr Ile Ser Cys Cys Glu Gln Thr Leu
 305 310 315 320
 Asn Thr Leu Arg Tyr Ser Ser Arg Val Lys Asn Lys Gly Asn Ser Lys
 325 330 335
 Leu Glu Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr
 340 345 350
 Arg Thr Gly His His His His His His
 355 360

10006780-113001

<210> 9

<211> 987
 <212> DNA
 <213> P. Falciparum

<400> 9
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 gatatgacaa aatatataga aaggcatgaa tttattgtag ataaagtttt tgatgatacg 180
 gttgataatt tcacagtata tgagaatacc ataaaacat taataataga tttatatgag 240
 aatgggttg tatgttcttg ttttgcttat gggcaaacag gtagcgggaa gacttatacg 300
 atgttaggtt cacaaccgta tggacagagt gataccctg gtatatattca atacgcagca 360
 ggggatatat ttacctttt aaatatattat gataaagata atacgaaagg gatatttata 420
 tcattttatg aaattttattg tggtaaatta tatgatttat tacaaaaacg taagatggta 480
 gcagcattag aaaatgggaa aaaagaagtt gtagtaaaag atttaaaaat attaagagta 540
 ttaacaaaag aagaattaat attaaaaatg atagatgggtg ttttattaag aaaaattggg 600
 gttaattcac aaaacgatga atcatctaga tcacatgcta tattaaatat tgatttataa 660
 gatataaata aaaatacatc tcttgaaaaa attgctttca ttgatttagc aggaagtga 720
 agaggagctg ataccgtttc acaaaataaa caaacacaaa ccgatggagc taatattaat 780
 agatctttac tagccttaaa ggaatgtatt cgagctatgg attcagataa aaatcatata 840
 cctttcagag attcagaatt aactaaagtt ttaagagata tatttgtagg gaaatctaaa 900
 agtattatga tagctaatat ttctctaca attagttgtt gtgagcaaac attgaatata 960
 ttaagatatt cttcaagagt taagaac 987

<210> 10
 <211> 332
 <212> PRT
 <213> P. Falciparum

<400> 10
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 Lys Lys Asp Ser Asp Ile Ile Thr Val Lys Asn Asn Cys Thr Leu Tyr
 20 25 30
 Ile Asp Glu Pro Arg Tyr Lys Val Asp Met Thr Lys Tyr Ile Glu Arg
 35 40 45
 His Glu Phe Ile Val Asp Lys Val Phe Asp Asp Thr Val Asp Asn Phe
 50 55 60
 Thr Val Tyr Glu Asn Thr Ile Lys Pro Leu Ile Ile Asp Leu Tyr Glu
 65 70 75 80
 Asn Gly Cys Val Cys Ser Cys Phe Ala Tyr Gly Gln Thr Gly Ser Gly
 85 90 95
 Lys Thr Tyr Thr Met Leu Gly Ser Gln Pro Tyr Gly Gln Ser Asp Thr
 100 105 110
 Pro Gly Ile Phe Gln Tyr Ala Ala Gly Asp Ile Phe Thr Phe Leu Asn
 115 120 125
 Ile Tyr Asp Lys Asp Asn Thr Lys Gly Ile Phe Ile Ser Phe Tyr Glu
 130 135 140
 Ile Tyr Cys Gly Lys Leu Tyr Asp Leu Leu Gln Lys Arg Lys Met Val
 145 150 155 160
 Ala Ala Leu Glu Asn Gly Lys Lys Glu Val Val Val Lys Asp Leu Lys
 165 170 175
 Ile Leu Arg Val Leu Thr Lys Glu Glu Leu Ile Leu Lys Met Ile Asp
 180 185 190
 Gly Val Leu Leu Arg Lys Ile Gly Val Asn Ser Gln Asn Asp Glu Ser
 195 200 205

10006780-113001

Ser Arg Ser His Ala Ile Leu Asn Ile Asp Leu Lys Asp Ile Asn Lys
 210 215 220
 Asn Thr Ser Leu Gly Lys Ile Ala Phe Ile Asp Leu Ala Gly Ser Glu
 225 230 235 240
 Arg Gly Ala Asp Thr Val Ser Gln Asn Lys Gln Thr Gln Thr Asp Gly
 245 250 255
 Ala Asn Ile Asn Arg Ser Leu Leu Ala Leu Lys Glu Cys Ile Arg Ala
 260 265 270
 Met Asp Ser Asp Lys Asn His Ile Pro Phe Arg Asp Ser Glu Leu Thr
 275 280 285
 Lys Val Leu Arg Asp Ile Phe Val Gly Lys Ser Lys Ser Ile Met Ile
 290 295 300
 Ala Asn Ile Ser Pro Thr Ile Ser Cys Cys Glu Gln Thr Leu Asn Thr
 305 310 315 320
 Leu Arg Tyr Ser Ser Arg Val Lys Asn Phe Lys Asn
 325 330

10006780-113001